

PROGRESS REPORT

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2p
CONDUCT RESEARCH ON THE EFFECT OF VERY STRONG FIELDS
AND OF MAGNETIC FIELD-FREE ENVIRONMENTS ON MAN AND ANIMALS

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During the reporting period the following progress was made.

Exposure of man to low magnetic fields.

Four male volunteers have been exposed to very low magnetic fields at the magnetic coil facilities of the Naval Ordnance Laboratory during the period of April 10 to May 1, 1964. The actual exposure period of 10 days to a magnetic field of one thousandth of the earth's field was arranged in-between two control periods of 6 days each. In addition, two men were restricted in the same building to the same living conditions as the test subjects. Representatives of the NASA Office of Biotechnology and Human Research, Washington, visited NOL during the experiment and received a demonstration of the experimental approach.

It will take a few weeks to evaluate the extensive material collected during this experiment. The main preliminary result is confirming previous observations of flicker-fusion studies. The scotopic flicker-fusion limit was reduced in all subjects during the 10 day-exposure period to a low magnetic field by an average of 30% of its original value during the control period. The values returned gradually to control values during the after exposure control period. It appears that the absence of the geomagnetic field has certain effects on vision, and it is hoped that the full evaluation of the results of the experiment will allow characterization of these effects more closely. The results will be of great interest in connection with lunar expeditions.

